

Circuit breakers for motor protection and control

Deca, Giga motor circuit breakers provide compact, reliable and efficient solutions for:

- isolation,
- protection against short circuits and overloads,
- On-Off manual control of motors from 0.06 to 250 kW.

They are conforming to, depending of the versions, IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1 and UL 60947-4-1, CSA 22.2 n° 60947-4-1.

Deca, Giga protection technologies

Deca, Giga circuit breakers are carried with 3 variants:

- Magnetic detection: product references GV2LE, GV2L, GV3L, GV4L, GV4LE for protection against short-circuit.
 - Thermal-magnetic: product references GV2ME ⁽¹⁾, GV2P, GV3P, GV4P, GV4PE, GV5, GV6 for protection against short-circuits, overload, phase loss and phase unbalance.
 - Advanced: product references GV4PEM combines GV4P protections and motor jam, long start, ground-fault protections.
- With a magnetic circuit breaker, a thermal relay is frequently associated in order to have a short circuit protection and an overload protection.

TeSys Deca - Frame 2 circuit breakers: 45 mm width, for motors up to 15 kW

The most commonly used circuit breaker. with a choice of about 100 auxiliaries and accessories. TeSys Deca Frame 2 circuit breakers and TeSys K, Deca contactors can be easily assembled as a single block with one accessory.

The high Frame 2 electrical endurance (up to 100 000 operating cycles) makes it very suitable for direct manual motor control, especially ref. GV2ME ⁽¹⁾ (thermal-magnetic c.b., lth up to 32 A).

Enclosure mounting is well adapted to ref. GV2L and GV2P, with their possible extended rotary handle and visible trip indication.

TeSys Deca - Frame 3 circuit breakers: 55 mm width, for motors up to 45 kW

High performance breakers, high breaking capacity (Ics 100 kA/400 V for ratings up to 32 A, 50 kA up to 80 A).

Wide choice of auxiliaries / accessories, possible extended rotary handle. Visible tri indication.

Patented Everlink connectors provide everlasting connection (no re-tightening required).

Direct monoblock starter assembly with TeSys Deca contactors. No accessory required.

TeSys Deca - Frame 4 circuit breakers: 81 mm width, for motors up to 55 kW

State-of-the-art technology, TeSys Deca Frame 4 is compact and robust. Electronic core of ref. GV4P gives a great detection accuracy, with alarming and advanced protections for ref. GV4PEM, GV4PB.

Magnetic, electronic thermal-magnetic, or electronic thermal-magnetic with advanced protections versions.

Ratings up to 115 A with breaking capacity Ics of 25 kA/400 V (B series), 50 kA/400 V (N series) or 100 kA/400 V (S series).

TeSys Giga - Frame 5: 105 mm width, for motors up to 110 kW / Frame 6: 140 mm width, for motors up to 250 kW

TeSys Giga - Frame 5 and 6 with advanced thermal-magnetic trip unit provide more effective protection to high power motors in the most demanding appliances.

They provide protection to motors against overloads with selection of a trip class (5, 10 or 20), short-circuits, phase unbalance or phase loss.

Adjustable over-load and short circuit current settings provide flexibility.

Wide choice of auxiliaries/accessories are available for indication, control and operation.



⁽¹⁾ Ref. GV2ME●●AP are specific GV2ME references for CEE zone.



Characteristics:
p. B6/140

Curves:
p. B6/141 to B6/143

Dimensions:
p. B6/146 to B6/151

Schemes:
p. B6/152

PB120638.eps



GV5P220F

Thermal-magnetic circuit breakers Frame 5 with screw clamp terminals up to 110 kW ⁽¹⁾

Control by direct rotary handle

Standard power ratings of 3-phase motors
50/60 Hz in category AC-3

400/415 V			500 V			660/690 V			Thermal setting range (Ir)	Reference	Weight
P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾			
kW	kA	%	kW	kA	%	kW	kA	%	A		kg
55...75	36	100	75...90	30	100	90...110	8	100	70...150	GV5P150F	2.4
	70	100		50	100		10	100		GV5P150H	
90...110	36	100	110	30	100	110...132	8	100	100...220	GV5P220F	2.6
	70	100		50	100		10	100		GV5P220H	

⁽¹⁾ Breakers have to be used with suitable rating of contactors, as defined in section A6.

⁽²⁾ As % of Icu.

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GV6P320F

Thermal-magnetic circuit breakers Frame 6 with screw clamp terminals up to 250 kW ⁽¹⁾

Control by direct rotary handle

Standard power ratings of 3-phase motors
50/60 Hz in category AC-3

400/415 V			500 V			660/690 V			Thermal setting range (Ir)	Reference	Weight
P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾			
kW	kA	%	kW	kA	%	kW	kA	%	A		kg
132...160	36	100	160...200	25	100	200...250	10	100	160...320	GV6P320F	6.5
	70	100		50	100		10	100		GV6P320H	
200...250	36	100	250...315	25	100	315...400	10	100	250...500	GV6P500F	6.7
	70	100		50	100		10	100		GV6P500H	

⁽¹⁾ Breakers have to be used with suitable rating of contactors, as defined in section A6.

⁽²⁾ As % of Icu.

Thermal-magnetic circuit breakers Frame 5/6 with screw clamp terminals ⁽¹⁾

Control by direct rotary handle

Thermal setting	3-Phase			Standard breaking capacity	High breaking capacity
	230 V	460 V	575 V		
A	HP	HP	HP	Reference	Reference
90...150	50	100	150	GV5P150F	GV5P150H
133...220	75	150	200	GV5P220F	GV5P220H
160...320	125	250	300	GV6P320F	GV6P320H
250...500	150	350	500	GV6P500F	GV6P500H

⁽¹⁾ Breakers have to be used with suitable rating of contactors, as defined in section A6.

Motor
circuit
breakers

GV4LE50B6	GV4PB80S	GV4PEM115S	GVAED101
GV4LE50N	GV4PE02N	GV4PEM115S6	GVAED1013
GV4LE50N6	GV4PE02N6	GV4PEM12N	GVAM11
GV4LE50S	GV4PE02S	GV4PEM12N6	GVAN11
GV4LE50S6	GV4PE02S6	GV4PEM12S	GVAN113
GV4LE80B	GV4PE03N	GV4PEM12S6	GVAN20
GV4LE80B6	GV4PE03N6	GV4PEM25B	GVAN203
GV4LE80N	GV4PE03S	GV4PEM25B6	GVAPBPHP
GV4LE80N6	GV4PE03S6	GV4PEM25N	GVAPH02
GV4LE80S	GV4PE07N	GV4PEM25N6	GVAPK11
GV4LE80S6	GV4PE07N6	GV4PEM25S	GVAPYPHP
GV4LUG	GV4PE07S	GV4PEM25S6	GVAS025
GV4P02N	GV4PE07S6	GV4PEM50B	GVAS026
GV4P02N6	GV4PE115B	GV4PEM50B6	GVAS055
GV4P03N	GV4PE115B6	GV4PEM50N	GVAS115
GV4P03N6	GV4PE115N	GV4PEM50N6	GVAS116
GV4P07N	GV4PE115N6	GV4PEM50S	GVAS207
GV4P07N6	GV4PE115S	GV4PEM50S6	GVAS225
GV4P115B	GV4PE115S6	GV4PEM80B	GVAS226
GV4P115B6	GV4PE12N	GV4PEM80B6	GVAS385
GV4P115N	GV4PE12N6	GV4PEM80N	GVAS415
GV4P115N6	GV4PE12S	GV4PEM80N6	GVAU025
GV4P115S	GV4PE12S6	GV4PEM80S	GVAU055
GV4P12N	GV4PE25B	GV4PEM80S6	GVAU115
GV4P12N6	GV4PE25B6	GV5AP03	GVAU116
GV4P25B	GV4PE25N	GV5P150F	GVAU125
GV4P25B6	GV4PE25N6	GV5P150H	GVAU207
GV4P25N	GV4PE25S	GV5P220F	GVAU225
GV4P25N6	GV4PE25S6	GV5P220H	GVAU226
GV4P50B	GV4PE50B	GV6AP03	GVAU385
GV4P50B6	GV4PE50B6	GV6P320F	GVAU386
GV4P50N	GV4PE50N	GV6P320H	GVAU415
GV4P50N6	GV4PE50N6	GV6P500F	GVAU416
GV4P80B	GV4PE50S	GV6P500H	GVAU505
GV4P80B6	GV4PE50S6	GV7AC01	GVAX115
GV4P80N	GV4PE80B	GV7AC021	GVAX116
GV4P80N6	GV4PE80B6	GV7AC022	GVAX225
GV4P80S	GV4PE80N	GV7AC03	GVAX226
GV4PB02N	GV4PE80N6	GV7AC04	GVAX385
GV4PB02S	GV4PE80S	GV7AC05	GVAX386
GV4PB03N	GV4PE80S6	GV7AC06	GVAX415
GV4PB03S	GV4PEM02N	GV7AC08	LA9E07
GV4PB07N	GV4PEM02N6	GV7AP01	LAD311
GV4PB07S	GV4PEM02S	GV7AP02	LAD96590
GV4PB115B	GV4PEM02S6	GV7AP04	LAD96595
GV4PB115N	GV4PEM03N	GV7AP05	LV429385
GV4PB115S	GV4PEM03N6	GVAD0101	LV429386
GV4PB12N	GV4PEM03S	GVAD0110	LV429387
GV4PB12S	GV4PEM03S6	GVAD1001	LV429388
GV4PB25B	GV4PEM07N	GVAD1010	LV429405
GV4PB25N	GV4PEM07N6	GVAE1	LV429406
GV4PB25S	GV4PEM07S	GVAE11	LV429407
GV4PB50B	GV4PEM07S6	GVAE113	LV429408
GV4PB50N	GV4PEM115B	GVAE20	
GV4PB50S	GV4PEM115B6	GVAE203	
GV4PB80B	GV4PEM115N	GVAED011	
GV4PB80N	GV4PEM115N6	GVAED0113	

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